

TITLE

UTILIZATION OF STARCH PRODUCTS FOR BIOLOGICAL
PRODUCTION BY FERMENTATION

ABSTRACT

5 This invention relates to a method for utilizing less purified starch in
fermentation processes. One example is a recombinant *E. coli* containing
a exogenous extracellular isoamylase activity that is capable of utilizing
small oligomers containing (1,6) linkages (including but not limited to
isomaltose and panose) in fermentations to produce useful products.
10 The invention is useful in large-scale industrial biofermentations by
reducing the cost of the substrate carbohydrate.

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LAF/dmm